

REMARKS

Reconsideration of this application, in view of the foregoing amendments and the following remarks, is respectfully requested.

Claim Rejections under 35 USC § 112

Claims 9-12 are rejected under 35 U.S.C. 112, second paragraph for certain informalities.

Claims 9-12 have been amended to remove informalities.

Claim Rejections -35 USC § 102

Claims 1, 3-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Miya et al U.S. Patent No 5,818,869. Applicants respectfully traverse these rejections.

To anticipate a claim, the reference must teach each and every limitation. MPEP §2131. As to claim 1, Miya does not teach each and every limitation. In fact, there are very clear and distinct differences between what is recited in claim 1 and apparatus described by Miya.

First, claim 1 recites correlating at least one sample of the sequence of samples with one or more samples of the sequence of samples to generate a plurality of correlation results. In rejecting this limitation, the Examiner has stated that “(b) a matched filter for correlating at least one sample of the sequence of samples (see figs.10-1 I element 105 and col.2, lines 27-30 and col.3, lines 24-27, 57-60) with one or more samples of the sequence of samples (see figs.10-11 clock samples element 103) to generate a plurality of correlation results (see the two outputs of 105);” (emphasis added). Applicants respectfully point to the Examiner that the two outputs of the digital match filter 105 actually refer to individual I and Q channels. Further, nowhere in the cited section, Miya describes that the digital filter 105 correlates one or more samples with the sequence of samples as recited in claim 1. In fact, Miya does not even provide details of the digital filter 105. The Examiner’s reading of the function of digital filter 105 is not supported by the description of Miya. Applicants respectfully request the Examiner to provide proper citations of Miya that describes the function of digital filter 105 as the Examiner has

stated. Miya does not teach the limitation correlating at least one sample of the sequence of samples with one or more samples of the sequence of samples to generate a plurality of correlation results as recited in claim 1.

Second, claim 1 recites computing a correlation value from the plurality of correlation results. IN rejecting this limitation, the Examiner stated that “an envelope detector is the same as the claimed (computing a correlation) (see figs. 10-11 element 106 and col.3, lines 25-27) value from the plurality of correlation results;” (emphasis added). Applicants respectfully point to the Examiner that actually, the envelop detector 106 detects the outer positions of the sampled signal and generates plurality of values representing the envelop of the sampled signal as opposed to generating a correlation value as recited in claim 1. Applicants would like to respectfully point to claim 1, lines 9-11 of Miya, which clearly states that the envelop detector generates “plurality of sample positions” and not a correlation value as recited in claim 1. Miya does not teach this limitation.

Third, claim 1 recites comparing the correlation value with a threshold. In rejecting this limitation, the Examiner stated that Miya teaches “(c) comparing the correlation result with a threshold (see figs.10-11 element 108 and col.3, lines 27-40, 65-67 and col.4, lines 13-40);” (emphasis added). Applicants respectfully point to the Examiner that claim 1 clearly recites two distinct terms 1) correlation result; and 2) correlation value. As explained above, Miya does not teach computing a correlation value as recited in claim 1. Thus, the comparator cannot compare a correlation value. Miya does not teach this limitation.

Fourth, claim 1 recites sampling the channel at a second sampling rate based on the result of the comparison. The Examiner has stated “(d)feedback loop is the same as the claimed (sampling the channel at a second sampling rate) (see figs. 10-11 feedback elements 110-103 and col.8, lines 8-35, 65-67 and col.9, lines 1-9) based on the result of the comparison.” (Emphasis added). The Examiner has cited comparator 108 as comparing the correlation value with a threshold; however, the feedback loop that the Examiner has cited is not operative in response to the comparator. Actually, the feedback loop does not even function unless peak positions of incoming signal change rapidly or are instable (see col. 8, lines 4-39). Further, the feedback loop is operative in response to peak position change rate measuring circuit 120, which monitors the

change in peak positions detected by the peak position detecting circuit 111. Accordingly, Miya does not teach sampling the channel at a second sampling rate based on the result of the comparison.

Therefore, Miya does not teach each and every limitation of claim 1 and does not anticipate claim 1. Accordingly, claim 1 and those depend therefrom are clearly and patentably distinguishable from Miya.

As to claim 3, the Examiner has stated that "Miya et al teaches wherein the correlating step comprises correlating the sequence of samples with a reference sequence of samples stored in a memory (see figs.10-11 element 109 and col.4, lines 14-15)." (Emphasis added). Applicants respectfully point to the Examiner that the memory 109 does not store a reference sequence of samples as recited in claim 3. The memory 109 actually stores the position of the incoming sample, which is used to determine the peak position in the symbol. Accordingly, Miya does not teach this limitation.

As per claim 14, the Examiner has stated that "Miya et al. inherently teaches teach wherein the correlation step is performed after a specified number of new samples are produced as to accurately compute the energy of the sample sequence with the lag N." (Emphasis added). Applicants respectfully point to the Examiner that Miya is directed to detecting signal position for every sample to determine the peak position. It performs peak detection to determine the stability in peak position so that the sampling rate can be adjusted accordingly. Nowhere in the cited reference Miya even hints collecting a specified number of new samples before correlating them. In fact, performing correlation after a specified number of new samples are produced kills the entire purpose of Miya's apparatus. Accordingly, Miya does not teach expressly or inherently to perform correlation after a number of samples are produced.

The Examination of Claims 22-25

The office action does not contain the examination of claims 22-25. Applicants believe that these claims are patentably distinguishable from the combination of cited reference and request allowance of these claims.

Claim Rejections -35 USC § 103

Claims 15-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miya et al U.S. Patent No 5,818,869 in view of Doi et al U.S. Patent No 5,870,594. Applicants respectfully traverse these rejections.

Claims 15 and 19 have been rejected using the similar reasoning as claim 1. Accordingly, claims 15 and 19 and those depend therefrom are patentably distinguishable from the combination of cited references for at least the same reasons as claim 1.

Applicant believes this application and the claims herein to be in a condition for allowance. Please charge any additional fees, or credit overpayment to Deposit Account No. 20-0668. Should the Examiner have further inquiry concerning these matters, please contact the below named attorney for Applicant.

Respectfully submitted,



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